

**UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF VIRGINIA**

SONY MUSIC ENTERTAINMENT, *et al.*,

Plaintiffs,

v.

COX COMMUNICATIONS, INC., *et al.*,

Defendants.

Case No. 1:18-cv-00950-LO-JFA

**MEMORANDUM IN OPPOSITION TO COX'S MOTION TO EXCLUDE THE  
TESTIMONY OF PUTATIVE EXPERT BARBARA FREDERIKSEN-CROSS**

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## INTRODUCTION

Cox's motion to preclude certain proffered expert testimony from Barbara Frederiksen-Cross is baseless. Ms. Frederiksen-Cross has over forty-four years of experience as a software developer and consultant, including training in forensic analysis of computer software in the context of intellectual property and work as an expert in state and federal courts testifying about the operation of computer software and systems. Ms. Frederiksen-Cross provided significant testimony in *BMG v. Cox*, with this Court stating she "testified competently at trial." *See BMG Rights Mgmt. (US) LLC v. Cox Commc'ns, Inc.*, No. 1:14-cv-1611, ECF No. 920 at 3 (Order) (E.D. Va. June 20, 2018). As part of her work in this action, Ms. Frederiksen-Cross independently assessed the MarkMonitor infringement detection and notification system ("MarkMonitor system") to assess the methodologies MarkMonitor used for monitoring, verifying, and providing notices to Internet service providers including Cox. Her proffered testimony will help the jury understand the operation of the MarkMonitor system and the nature of the data it collected regarding Cox subscriber activity.

Cox claims that the MarkMonitor records Bates numbered as Plaintiffs\_00286431 (the "'431 Spreadsheet") are an "incomplete and inaccurate summary of the Audible Magic verification process" and that any of her opinions and testimony relying on those records should be precluded. Cox's motion fails on several grounds. First, Cox confuses and distorts the MarkMonitor records that Ms. Frederiksen-Cross reviewed, without showing them to be unreliable. Second, contrary to Cox's assertions, Ms. Frederiksen did not testify as to MarkMonitor's verifications "in exclusive reliance on the '431 Spreadsheet." Third, Cox's arguments go to the weight, not admissibility, of Ms. Frederiksen-Cross's testimony. While

Cox's criticisms of the '431 Spreadsheet are misguided, they are something that, at most, should be pursued on cross-examination.

## BACKGROUND

From February 1, 2013 through November 26, 2014 (the "Claim Period"), MarkMonitor sent Cox 163,148 infringement notices. The notices were made under penalty of perjury and included the elements of information required under the Digital Millennium Copyright Act, 17 U.S.C. § 512(c)(3)(A). The notices contained, *inter alia*, an identification of the Cox subscriber by IP address, the specific date and time of the infringing act, a cryptographic hash value pertaining to the file, a representative sample of what was infringed, and the peer-to-peer network used. [REDACTED]

Gould Decl. Ex. 1 (Bahun Decl. in Supp. of Pls.' Opp. to Def. Mot. for Sanctions, ECF No. 352-1 ("Bahun Decl.")), ¶ 19. The digital files [REDACTED]

[REDACTED] have been produced in discovery. *Id.* ¶ 20. Anyone, including Cox, can listen to the audio recordings within those files. Cox has not pointed to a single misidentification of the audio recordings.

Ms. Frederiksen-Cross issued her opening report on April 10, 2019. In pertinent part, her opinions include:

- The MarkMonitor system accurately identifies peers who are distributing content using the BitTorrent, Ares, Gnutella, and eDonkey protocols.
- The MarkMonitor methodology is well-developed and provides accurate detection of peer-to-peer file distribution of Plaintiffs' copyrighted works, including accurate determination that the shared file is the actual copyrighted work at issue.
- The MarkMonitor system prepares and sends accurate notices to Cox. These notices reflect the information associated with the peer-to-peer ("P2P") file distribution activity MarkMonitor detected. The notices contain information sufficient to allow Cox [REDACTED]. Notice data

includes the Internet Protocol (“IP”) address, date, identification of a representative copyrighted work, and port number, as well as other information.

*See Alvarez Decl. in Supp. Of Cox’s Mot. to Exclude the Testimony of Putative Expert Barbara Frederiksen-Cross (“Alvarez Decl.”), ECF No. 311-1, Ex. D (Report of Barbara Frederiksen-Cross, April 10, 2019 (“Frederiksen-Cross Rept.”)), ¶ 3.*

Thereafter, Ms. Frederiksen-Cross issued a reply report on June 13, 2019. *See id.*, Ex. E (Supplemental and Reply Report of Barbara Frederiksen-Cross). In that report, she responds to the rebuttal report of Cox’s expert, Dr. Nick Feamster.

## **ARGUMENT**

### **I. LEGAL STANDARD**

Federal Rule of Evidence 702 permits an expert to provide opinions on scientific matters, technical matters, or matters involving other specialized knowledge if the testimony “will assist the trier of fact to understand the evidence or to determine a fact in issue.” Fed. R. Evid. 702(a). The “touchstone of the rule is whether the testimony will assist the jury.” *United States v. Offill*, 666 F.3d 168, 175 (4th Cir. 2011).

Trial courts act as gatekeepers to ensure that expert testimony is reliable and relevant.

*See Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 589 (1993). “The inquiry to be undertaken by the district court is ‘a flexible one’ focusing on the ‘principles and methodology’ employed by the expert, not on the conclusions reached.” *Westberry v. Gislaved Gummi AB*, 178 F.3d 257, 261 (4th Cir. 1999) (quoting *Daubert*, 509 U.S. at 594-95). Courts “should be mindful that Rule 702 was intended to liberalize the introduction of relevant expert evidence” and that, “[a]s with all other admissible evidence, expert testimony is subject to being tested by ‘[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof.’” *Id.* (quoting *Daubert*, 509 U.S. at 596); *see also* Fed. R. Evid. 702 advisory

committee's note to 2000 amendment ("[R]ejection of expert testimony is the exception rather than the rule."). As a rule, "questions regarding the factual underpinnings of the [expert witness'] opinion affect the weight and credibility" of the witness' assessment, "not its admissibility." *Bresler v. Wilmington Tr. Co.*, 855 F.3d 178, 195 (4th Cir. 2017) (quoting *Structural Polymer Grp. v. Zoltek Corp.*, 543 F.3d 987, 997 (8th Cir. 2008)).

## **II. COX'S CLAIM THAT THE '431 SPREADSHEET IS UNRELIABLE LACKS MERIT**

Cox asserts a litany of problems it perceives with respect to the '431 Spreadsheet. In the process, Cox confuses the record evidence and draws the wrong conclusions. Cox has not shown the '431 Spreadsheet to be an "incomplete and inaccurate summary of the Audible Magic verification process" or unreliable.

### **A. The '431 Spreadsheet Includes Audible Magic Data, Not a Summary of It**

[REDACTED]

Thus, Cox incorrectly describes the '431 Spreadsheet as a "summary" of the Audible Magic data. *See* Cox Mot. 1, 7-8.

**B. MarkMonitor Retained Audible Magic's Verifications**

Contrary to Cox's assertions (Mot. 7-8), MarkMonitor did not discard any data sent by Audible Magic showing whether a match had been made. As discussed above, Audible Magic's verification consisted of the information it provided as to the artist, album, and track for the unknown audio, and MarkMonitor preserved that Audible Magic data dating back to 2008.

Gould Decl. Ex. 1, ¶¶ 16-17 (Bahun Decl.); Gould Decl. Ex. 2, ¶¶ 11 (Ikezoye Decl.). That data was produced in discovery in the '431 Spreadsheet. Gould Decl. Ex. 1, App'x A ¶ 23 (Bahun Decl.). Any other data fields that Audible Magic provided were superfluous to determining whether an unknown audio file matched a reference fingerprint in Audible Magic's database of copyrighted works. *Id.* ¶ 21; Gould Decl. Ex. 2, ¶¶ 13-15, 17 (Ikezoye Decl.).

**C. File Verification Is Reliable Regardless of the Precise Date of Verification**

The '431 Spreadsheet indicates [REDACTED]

[REDACTED]. See Gould Decl. Ex. 1, ¶ 16 (Bahun Decl.). Cox complains that, if a file was downloaded again at a later date and re-verified, MarkMonitor did not update the record to indicate that the data was current as of the re-verification date. See Cox Mot. 7-8. Cox's criticism of the '431 Spreadsheet is misplaced. A cryptographic hash value is an alphanumerical representation of the contents of a file. Gould Decl. Ex. 1, ¶ 16. Files with the same hash value are identical and will have the same contents, regardless when downloaded and examined. *Id.* App'x A ¶ 10. In other words, two files with the same hash value are identical and will have the same contents, regardless whether only verified once or also re-verified at one or more later dates.

**D. REV0003444 Does Not Undercut the '431 Spreadsheet**

Cox argues that a document produced by Audible Magic in discovery, REV0003444,

[REDACTED]  
[REDACTED] Cox Mot. 9. As Cox recognizes, [REDACTED]

[REDACTED] *Id.* 7.

Assuming REV0003444 is even what Cox believes it to be, that document is an *incomplete*

[REDACTED].<sup>1</sup> Not only does it have holes,

[REDACTED] Nonetheless, Cox inexplicably twists the

incomplete nature of REV0003444 into a supposed shortcoming of the '431 Spreadsheet.

Dr. Feamster made the wrong choice by using REV0003444. Ms. Frederiksen-Cross was and still is correct in relying upon the '431 Spreadsheet, which, unlike REV0003444, covers a longer period of time. She did not "cherry-pick" the data to review.

**E. The Post-2015 Data Does Not Undercut the '431 Spreadsheet**

Cox complains that, subsequent to the Claim Period, [REDACTED]

[REDACTED]  
[REDACTED] Cox Mot. 8-9. However, as explained above and

in the accompanying declarations, [REDACTED]

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<sup>1</sup> When Cox took Audible Magic's deposition, Cox failed to ask a single question as to REV0003444 to understand what it purported to be and what it included, nor did Cox authenticate the document. Cox asked general questions about a [REDACTED] in the abstract but did not present the witness with a purported [REDACTED] to confirm what document the witness had in mind. The Audible Magic witness testified that Audible Magic [REDACTED]

Gould Decl. ¶ 5 & Ex. 3

(Deposition of Audible Magic by Vance Ikezoye, dated May 6, 2019).

[REDACTED] Gould Decl. Ex. 1, ¶ 21 (Bahun Decl.); Gould Decl. Ex. 2, ¶ 17 (Ikezoye Decl.).

Any other Audible Magic data fields that MarkMonitor received—whether 2012-2014, before, or after—are wholly irrelevant or superfluous to the accuracy of the Audible Magic identification. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]. Gould Decl.

Ex. 2, ¶ 15 (Ikezoye Decl.); Gould Decl. Ex. 1, ¶¶ 21-24 (Bahun Decl.). While these data fields could conceivably be useful for other customers of Audible Magic, they simply have no bearing on whether Audible Magic accurately confirmed a match. Gould Decl. Ex. 2, ¶ 17 (Ikezoye Decl.). Indeed, Cox has not pointed to a single misidentification of the audio recordings.

### **III. COX OVERSTATES MS. FREDERIKSEN-CROSS'S RELIANCE ON THE '431 SPREADSHEET**

Cox argues that “Ms. Frederiksen-Cross formulated multiple opinions resting on the premise that MarkMonitor verified that its notices related to copies of the works in suit, and she adopted that premise in exclusive reliance on the '431 Spreadsheet.” Cox. Mot. 11. Cox mischaracterizes Ms. Frederiksen-Cross’s report and opinions, for which she considered source code and numerous documents and interviewed MarkMonitor and Audible Magic personnel.

Ms. Frederiksen-Cross’s reports plainly identify the many materials she considered in addition to the '431 Spreadsheet:

- “In order to conduct an audit of the MarkMonitor system, I interviewed MarkMonitor personnel, [and] conducted independent analysis of the source code of the software MarkMonitor uses to interact with P2P file distribution networks, collect evidence, and send notices.” Alvarez Decl. Ex. D, ¶ 14(b) (Frederiksen-Cross Rept.).

- “My assessment of the MarkMonitor system is based on the following information: the MarkMonitor source code, evidence files collected by MarkMonitor that were the basis for Cox notices, a spreadsheet summarizing the notices sent on behalf of RIAA and its members to Cox . . . and samples of notices sent to Cox on behalf of RIAA and its members.” *Id.* ¶ 51.
- “MarkMonitor used Audible Magic to confirm the identity of downloaded music files. As a part of my analysis, I also reviewed information relating to Audible Magic, including a copy of the Audible Magic ‘OEM Application Programming Guide and Customer Support Information’ and information that is publicly available on Audible Magic’s web site. I also interviewed Audible Magic’s Chief Scientist, Erling Wold. *Id.* ¶ 52.
- “I was also provided with two studies that address the efficacy and operation of the MarkMonitor system. These documents included reports prepared by Stroz Friedberg and Harbor Labs. In addition, I was provided a MarkMonitor document prepared for the RIAA and MPAA that describes MarkMonitor’s P2P Enforcement Process.” *Id.* ¶ 53.
- “I interviewed Mark Monitor employees Sam Bahun and Jacob Svalastoga.” *Id.* ¶ 54.
- “Materials Considered” included “Audible Magic source code, executable.” Alvarez Decl. Ex. E, ¶ 3.d.; *see also id.* ¶¶ 51, 59.

Based on the various materials she considered, Ms. Frederiksen-Cross discussed in detail how the MarkMonitor system operated and why she believed it was “based on a sound detection design and employed numerous safeguards that served to protect against generation of inaccurate notices.” *Id.* ¶ 94. Her opinions concerning the MarkMonitor system and the notices sent to Cox should not be assessed based solely on the ’431 Spreadsheet where that spreadsheet was only one aspect of her analysis.

Accordingly, even if the ’431 Spreadsheet were unreliable (and it is not), Cox’s requested remedy is overreaching.

#### **IV. ANY CRITICISMS OF MS. FREDERIKSEN-CROSS’S TESTIMONY GO TO WEIGHT, NOT ADMISSIBILITY**

Any limitations concocted by Cox merely go to weight—not admissibility—and can be explored on cross-examination. *See Bresler*, 855 F.3d at 195. Indeed, the facts and data relied

upon by experts are often in dispute, and the jury is tasked with resolving those disputes. *See* Fed. R. Evid. 702 advisory committee's note to 2000 amendment ("The emphasis in the amendment on 'sufficient facts or data' is not intended to authorize a trial court to exclude an expert's testimony on the ground that the court believes one version of the facts and not the other.").

None of the cases cited by Cox require otherwise. *See* Cox Mot. 10-12. As one circuit court explained, "[t]here is an important difference between what is unreliable support and what a trier of fact may conclude is insufficient support for an expert's conclusion." *Milward v. Acuity Specialty Prods. Grp.*, 639 F.3d 11, 22 (1st Cir. 2011) (reversing district court that repeatedly challenged the factual underpinnings of an expert's opinions). "The soundness of the factual underpinnings of the expert's analysis and the correctness of the expert's conclusions based on that analysis are factual matters to be determined by the trier of fact. When the factual underpinning of an expert's opinion is weak, it is a matter affecting the weight and credibility of the testimony—a question to be resolved by the jury." *Id.* (quoting *Smith v. Ford Motor Co.*, 215 F.3d 713, 718 (7th Cir. 2000)).

Cox accepts Ms. Frederiksen-Cross's qualifications and the relevance of her testimony. The alleged flaws of the data underlying her opinion go to the weight of her testimony and are not bases for limiting it.

## **CONCLUSION**

For the reasons discussed above, Plaintiffs respectfully request that the Court deny Cox's motion to limit certain portions of the proffered testimony of Ms. Frederiksen-Cross.

Respectfully submitted,

Dated September 24, 2019

/s/ Scott A. Zebrak

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